

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/511,561  
Source: PCT  
Date Processed by STIC: 11/1/04

***ENTERED***

## CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/511,561

CRF Edit Date: 11/10/04  
Edited by: ZL

Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

Corrected the SEQ ID NO. Sequence numbers edited were:

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

Deleted: / invalid beginning/end-of-file text ; \_\_\_\_ page numbers

Inserted mandatory headings/numeric identifiers, specifically:

Moved responses to same line as heading/numeric identifier, specifically:

Other:



PCT

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/511,561

DATE: 11/01/2004

TIME: 11:54:09

Input Set : A:\pto.kd.txt

Output Set: N:\CRF4\10292004\J511561.raw

2 <110> APPLICANT: Chan, Doug W  
 3 Chen, Ping-Chi B  
 4 Chen, David J  
 6 <120> TITLE OF INVENTION: DNA Dependent Protein Kinase Catalytic Subunit  
 Phosphorylation Sites  
 7 and Antibodies Thereto  
 W--> 8 <130> FILE REFERENCE: IB-1807 PCT  
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/511,561  
 C--> 12 <141> CURRENT FILING DATE: 2004-10-15  
 14 <150> PRIOR APPLICATION NUMBER: US 60/375,094  
 16 <151> PRIOR FILING DATE: 2002-04-22  
 18 <160> NUMBER OF SEQ ID NOS: 28  
 20 <170> SOFTWARE: PatentIn version 3.1  
 24 <210> SEQ ID NO: 1  
 26 <211> LENGTH: 14  
 27 <212> TYPE: PRT  
 28 <213> ORGANISM: Artificial Sequence  
 30 <220> FEATURE:  
 31 <221> NAME/KEY: PEPTIDE  
 32 <222> LOCATION: (1)..(14)  
 33 <223> OTHER INFORMATION: HUMAN GENETIC ORIGIN  
 35 <220> FEATURE:  
 36 <221> NAME/KEY: MOD\_RES  
 37 <222> LOCATION: (7)..(7)  
 38 <223> OTHER INFORMATION: PHOSPHORYLATION at T2609  
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 42 Thr Pro Met Phe Val Glu Thr Gln Ala Ser Gln Gly Thr Cys  
 43 1 5 10  
 46 <210> SEQ ID NO: 2  
 48 <211> LENGTH: 14  
 49 <212> TYPE: PRT  
 50 <213> ORGANISM: Artificial Sequence  
 52 <220> FEATURE:  
 53 <221> NAME/KEY: PEPTIDE  
 54 <222> LOCATION: (1)..(14)  
 55 <223> OTHER INFORMATION: HUMAN GENETIC ORIGIN  
 57 <220> FEATURE:  
 58 <221> NAME/KEY: MOD\_RES  
 59 <222> LOCATION: (7)..(7)  
 60 <223> OTHER INFORMATION: PHOSPHORYLATION at S2056  
 62 <400> SEQUENCE: 2  
 64 Gln Ser Tyr Ser Tyr Ser Ser Gln Asp Pro Arg Pro Ala Cys  
 65 1 5 10  
 68 <210> SEQ ID NO: 3

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/511,561

DATE: 11/01/2004  
TIME: 11:54:09

Input Set : A:\pto.kd.txt  
Output Set: N:\CRF4\10292004\J511561.raw

70 <211> LENGTH: 4128  
 71 <212> TYPE: PRT  
 72 <213> ORGANISM: Homo sapiens  
 74 <400> SEQUENCE: 3  
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 77 1 5 10 15  
 80 Glu Thr Leu Ser Ala Ala Asp Arg Cys Gly Ala Ala Leu Ala Gly His  
 81 20 25 30  
 84 Gln Leu Ile Arg Gly Leu Gly Gln Glu Cys Val Leu Ser Ser Ser Pro  
 85 35 40 45  
 88 Ala Val Leu Ala Leu Gln Thr Ser Leu Val Phe Ser Arg Asp Phe Gly  
 89 50 55 60  
 92 Leu Leu Val Phe Val Arg Lys Ser Leu Asn Ser Ile Glu Phe Arg Glu  
 93 65 70 75 80  
 96 Cys Arg Glu Glu Ile Leu Lys Phe Leu Cys Ile Phe Leu Glu Lys Met  
 97 85 90 95  
 100 Gly Gln Lys Ile Ala Pro Tyr Ser Val Glu Ile Lys Asn Thr Cys Thr  
 101 100 105 110  
 104 Ser Val Tyr Thr Lys Asp Arg Ala Ala Lys Cys Lys Ile Pro Ala Leu  
 105 115 120 125  
 108 Asp Leu Leu Ile Lys Leu Leu Gln Thr Phe Arg Ser Ser Arg Leu Met  
 109 130 135 140  
 112 Asp Glu Phe Lys Ile Gly Glu Leu Phe Ser Lys Phe Tyr Gly Glu Leu  
 113 145 150 155 160  
 116 Ala Leu Lys Lys Ile Pro Asp Thr Val Leu Glu Lys Val Tyr Glu  
 117 165 170 175  
 120 Leu Leu Gly Leu Leu Gly Glu Val His Pro Ser Glu Met Ile Asn Asn  
 121 180 185 190  
 124 Ala Glu Asn Leu Phe Arg Ala Phe Leu Gly Glu Leu Lys Thr Gln Met  
 125 195 200 205  
 128 Thr Ser Ala Val Arg Glu Pro Lys Leu Pro Val Leu Ala Gly Cys Leu  
 129 210 215 220  
 132 Lys Gly Leu Ser Ser Leu Leu Cys Asn Phe Thr Lys Ser Met Glu Glu  
 133 225 230 235 240  
 136 Asp Pro Gln Thr Ser Arg Glu Ile Phe Asn Phe Val Leu Lys Ala Ile  
 137 245 250 255  
 140 Arg Pro Gln Ile Asp Leu Lys Arg Tyr Ala Val Pro Ser Ala Gly Leu  
 141 260 265 270  
 144 Arg Leu Phe Ala Leu His Ala Ser Gln Phe Ser Thr Cys Leu Leu Asp  
 145 275 280 285  
 148 Asn Tyr Val Ser Leu Phe Glu Val Leu Leu Lys Trp Cys Ala His Thr  
 149 290 295 300  
 152 Asn Val Glu Leu Lys Lys Ala Ala Leu Ser Ala Leu Glu Ser Phe Leu  
 153 305 310 315 320  
 156 Lys Gln Val Ser Asn Met Val Ala Lys Asn Ala Glu Met His Lys Asn  
 157 325 330 335  
 160 Lys Leu Gln Tyr Phe Met Glu Gln Phe Tyr Gly Ile Ile Arg Asn Val  
 161 340 345 350  
 164 Asp Ser Asn Asn Lys Glu Leu Ser Ile Ala Ile Arg Gly Tyr Gly Leu

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Input Set : A:\pto.kd.txt  
Output Set: N:\CRF4\10292004\J511561.raw

165	355	360	365
168	Phe Ala Gly Pro Cys Lys Val Ile Asn Ala Lys Asp Val Asp Phe Met		
169	370	375	380
172	Tyr Val Glu Leu Ile Gln Arg Cys Lys Gln Met Phe Leu Thr Gln Thr		
173	385	390	395
176	Asp Thr Gly Asp Tyr Arg Val Tyr Gln Met Pro Ser Phe Leu Gln Ser		400
177	405	410	415
180	Val Ala Ser Val Leu Leu Tyr Leu Asp Thr Val Pro Glu Val Tyr Thr		
181	420	425	430
184	Pro Val Leu Glu His Leu Val Val Met Gln Ile Asp Ser Phe Pro Gln		
185	435	440	445
188	Tyr Ser Pro Lys Met Gln Leu Val Cys Cys Arg Ala Ile Val Lys Val		
189	450	455	460
192	Phe Leu Ala Leu Ala Ala Lys Gly Pro Val Leu Arg Asn Cys Ile Ser		
193	465	470	475
196	Thr Val Val His Gln Gly Leu Ile Arg Ile Cys Ser Lys Pro Val Val		
197	485	490	495
200	Leu Pro Lys Gly Pro Glu Ser Glu Ser Glu Asp His Arg Ala Ser Gly		
201	500	505	510
204	Glu Val Arg Thr Gly Lys Trp Lys Val Pro Thr Tyr Lys Asp Tyr Val		
205	515	520	525
208	Asp Leu Phe Arg His Leu Leu Ser Ser Asp Gln Met Met Asp Ser Ile		
209	530	535	540
212	Leu Ala Asp Glu Ala Phe Phe Ser Val Asn Ser Ser Ser Glu Ser Leu		
213	545	550	555
216	Asn His Leu Leu Tyr Asp Glu Phe Val Lys Ser Val Leu Lys Ile Val		
217	565	570	575
220	Glu Lys Leu Asp Leu Thr Leu Glu Ile Gln Thr Val Gly Glu Gln Glu		
221	580	585	590
224	Asn Gly Asp Glu Ala Pro Gly Val Trp Met Ile Pro Thr Ser Asp Pro		
225	595	600	605
228	Ala Ala Asn Leu His Pro Ala Lys Pro Lys Asp Phe Ser Ala Phe Ile		
229	610	615	620
232	Asn Leu Val Glu Phe Cys Arg Glu Ile Leu Pro Glu Lys Gln Ala Glu		
233	625	630	635
236	Phe Phe Glu Pro Trp Val Tyr Ser Phe Ser Tyr Glu Leu Ile Leu Gln		
237	645	650	655
240	Ser Thr Arg Leu Pro Leu Ile Ser Gly Phe Tyr Lys Leu Leu Ser Ile		
241	660	665	670
244	Thr Val Arg Asn Ala Lys Lys Ile Lys Tyr Phe Glu Gly Val Ser Pro		
245	675	680	685
248	Lys Ser Leu Lys His Ser Pro Glu Asp Pro Glu Lys Tyr Ser Cys Phe		
249	690	695	700
252	Ala Leu Phe Val Lys Phe Gly Lys Glu Val Ala Val Lys Met Lys Gln		
253	705	710	715
256	Tyr Lys Asp Glu Leu Leu Ala Ser Cys Leu Thr Phe Leu Leu Ser Leu		
257	725	730	735
260	Pro His Asn Ile Ile Glu Leu Asp Val Arg Ala Tyr Val Pro Ala Leu		
261	740	745	750

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/511,561

DATE: 11/01/2004  
TIME: 11:54:09

Input Set : A:\pto.kd.txt  
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264 Gln Met Ala Phe Lys Leu Gly Leu Ser Tyr Thr Pro Leu Ala Glu Val  
265 755 760 765  
268 Gly Leu Asn Ala Leu Glu Glu Trp Ser Ile Tyr Ile Asp Arg His Val  
269 770 775 780  
272 Met Gln Pro Tyr Tyr Lys Asp Ile Leu Pro Cys Leu Asp Gly Tyr Leu  
273 785 790 795 800  
276 Lys Thr Ser Ala Leu Ser Asp Glu Thr Lys Asn Asn Trp Glu Val Ser  
277 805 810 815  
280 Ala Leu Ser Arg Ala Ala Gln Lys Gly Phe Asn Lys Val Val Leu Lys  
281 820 825 830  
284 His Leu Lys Lys Thr Lys Asn Leu Ser Ser Asn Glu Ala Ile Ser Leu  
285 835 840 845  
288 Glu Glu Ile Arg Ile Arg Val Val Gln Met Leu Gly Ser Leu Gly Gly  
289 850 855 860  
292 Gln Ile Asn Lys Asn Leu Leu Thr Val Thr Ser Ser Asp Glu Met Met  
293 865 870 875 880  
296 Lys Ser Tyr Val Ala Trp Asp Arg Glu Lys Arg Leu Ser Phe Ala Val  
297 885 890 895  
300 Pro Phe Arg Glu Met Lys Pro Val Ile Phe Leu Asp Val Phe Leu Pro  
301 900 905 910  
304 Arg Val Thr Glu Leu Ala Leu Thr Ala Ser Asp Arg Gln Thr Lys Val  
305 915 920 925  
308 Ala Ala Cys Glu Leu Leu His Ser Met Val Met Phe Met Leu Gly Lys  
309 930 935 940  
312 Ala Thr Gln Met Pro Glu Gly Gly Gln Gly Ala Pro Pro Met Tyr Gln  
313 945 950 955 960  
316 Leu Tyr Lys Arg Thr Phe Pro Val Leu Leu Arg Leu Ala Cys Asp Val  
317 965 970 975  
320 Asp Gln Val Thr Arg Gln Leu Tyr Glu Pro Leu Val Met Gln Leu Ile  
321 980 985 990  
324 His Trp Phe Thr Asn Asn Lys Lys Phe Glu Ser Gln Asp Thr Val Ser  
325 995 1000 1005  
328 Leu Leu Glu Ala Ile Leu Asp Gly Ile Val Asp Pro Val Asp Ser  
329 1010 1015 1020  
332 Thr Leu Arg Asp Phe Cys Gly Arg Cys Ile Arg Glu Phe Leu Lys  
333 1025 1030 1035  
336 Trp Ser Ile Lys Gln Ile Thr Pro Gln Gln Gln Glu Lys Ser Pro  
337 1040 1045 1050  
340 Val Asn Thr Lys Ser Leu Phe Lys Arg Leu Tyr Ser Leu Ala Leu  
341 1055 1060 1065  
344 His Pro Asn Ala Phe Lys Arg Leu Gly Ala Ser Leu Ala Phe Asn  
345 1070 1075 1080  
348 Asn Ile Tyr Arg Glu Phe Arg Glu Glu Glu Ser Leu Val Glu Gln  
349 1085 1090 1095  
352 Phe Val Phe Glu Ala Leu Val Ile Tyr Met Glu Ser Leu Ala Leu  
353 1100 1105 1110  
356 Ala His Ala Asp Glu Lys Ser Leu Gly Thr Ile Gln Gln Cys Cys  
357 1115 1120 1125  
360 Asp Ala Ile Asp His Leu Cys Arg Ile Ile Glu Lys Lys His Val

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PATENT APPLICATION: US/10/511,561

DATE: 11/01/2004  
TIME: 11:54:09

Input Set : A:\pto.kd.txt  
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361	1130	1135	1140
364	Ser Leu Asn Lys Ala Lys	Lys Arg Arg Leu Pro Arg	Gly Phe Pro
365	1145	1150	1155
368	Pro Ser Ala Ser Leu Cys	Leu Leu Asp Leu Val	Lys Trp Leu Leu
369	1160	1165	1170
372	Ala His Cys Gly Arg Pro	Gln Thr Glu Cys Arg	His Lys Ser Ile
373	1175	1180	1185
376	Glu Leu Phe Tyr Lys Phe	Val Pro Leu Leu Pro	Gly Asn Arg Ser
377	1190	1195	1200
380	Pro Asn Leu Trp Leu Lys	Asp Val Leu Lys Glu	Glu Gly Val Ser
381	1205	1210	1215
384	Phe Leu Ile Asn Thr Phe	Glu Gly Gly Cys	Gly Gln Pro Ser
385	1220	1225	1230
388	Gly Ile Leu Ala Gln Pro	Thr Leu Leu Tyr Leu	Arg Gly Pro Phe
389	1235	1240	1245
392	Ser Leu Gln Ala Thr Leu	Cys Trp Leu Asp Leu	Leu Leu Ala Ala
393	1250	1255	1260
396	Leu Glu Cys Tyr Asn Thr	Phe Ile Gly Glu Arg	Thr Val Gly Ala
397	1265	1270	1275
400	Leu Gln Val Leu Gly Thr	Glu Ala Gln Ser Ser	Leu Leu Lys Ala
401	1280	1285	1290
404	Val Ala Phe Phe Leu Glu	Ser Ile Ala Met His	Asp Ile Ile Ala
405	1295	1300	1305
408	Ala Glu Lys Cys Phe Gly	Thr Gly Ala Ala Gly	Asn Arg Thr Ser
409	1310	1315	1320
412	Pro Gln Glu Gly Glu Arg	Tyr Asn Tyr Ser Lys	Cys Thr Val Val
413	1325	1330	1335
416	Val Arg Ile Met Glu Phe	Thr Thr Leu Leu Asn	Thr Ser Pro
417	1340	1345	1350
420	Glu Gly Trp Lys Leu Leu	Lys Lys Asp Leu Cys	Asn Thr His Leu
421	1355	1360	1365
424	Met Arg Val Leu Val Gln	Thr Leu Cys Glu Pro	Ala Ser Ile Gly
425	1370	1375	1380
428	Phe Asn Ile Gly Asp Val	Gln Val Met Ala His	Leu Pro Asp Val
429	1385	1390	1395
432	Cys Val Asn Leu Met Lys	Ala Leu Lys Met Ser	Pro Tyr Lys Asp
433	1400	1405	1410
436	Ile Leu Glu Thr His Leu	Arg Glu Lys Ile Thr	Ala Gln Ser Ile
437	1415	1420	1425
440	Glu Glu Leu Cys Ala Val	Asn Leu Tyr Gly Pro	Asp Ala Gln Val
441	1430	1435	1440
444	Asp Arg Ser Arg Leu Ala	Ala Val Val Ser Ala	Cys Lys Gln Leu
445	1445	1450	1455
448	His Arg Ala Gly Leu Leu	His Asn Ile Leu Pro	Ser Gln Ser Thr
449	1460	1465	1470
452	Asp Leu His His Ser Val	Gly Thr Glu Leu Leu	Ser Leu Val Tyr
453	1475	1480	1485
456	Lys Gly Ile Ala Pro Gly	Asp Glu Arg Gln Cys	Leu Pro Ser Leu
457	1490	1495	1500

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/511,561

DATE: 11/01/2004

TIME: 11:54:10

Input Set : A:\pto.kd.txt

Output Set: N:\CRF4\10292004\J511561.raw

L:8 M:283 W: Missing Blank Line separator, <130> field identifier

L:10 M:270 C: Current Application Number differs, Replaced Current Application Number

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date



PCT

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/511,561

DATE: 10/26/2004  
TIME: 17:50:28

Input Set : A:\PTO.FG.txt  
Output Set: N:\CRF4\10262004\J511561.raw

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2 <110> APPLICANT: Chan, Doug W
3     Chen, Ping-Chi B
4     Chen, David J
6 <120> TITLE OF INVENTION: DNA Dependent Protein Kinase Catalytic Subunit
Phosphorylation Sites
7     and Antibodies Thereto
W--> 8 <130> FILE REFERENCE: IB-1807 PCT
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/511,561
C--> 12 <141> CURRENT FILING DATE: 2004-10-15
14 <150> PRIOR APPLICATION NUMBER: US 60/375,094
16 <151> PRIOR FILING DATE: 2002-04-22
18 <160> NUMBER OF SEQ ID NOS: 28
20 <170> SOFTWARE: PatentIn version 3.1

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Does Not Comply  
Corrected Diskette Needed  
(pg. 1-2)

## ERRORED SEQUENCES

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3228 <210> SEQ ID NO: 28
3230 <211> LENGTH: 34
3231 <212> TYPE: DNA
3232 <213> ORGANISM: Artificial Sequence
3234 <220> FEATURE:
3235 <223> OTHER INFORMATION: Reverse primer to create T2609A mutation
3237 <400> SEQUENCE: 28
3239 gccctgggag gcctggtcct ccacaaacat cgga
E--> 3242 1

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VERIFICATION SUMMARY  
PATENT APPLICATION: US/10/511,561

DATE: 10/26/2004  
TIME: 17:50:29

Input Set : A:\PTO.FG.txt  
Output Set: N:\CRF4\10262004\J511561.raw

L:8 M:283 W: Missing Blank Line separator, <130> field identifier  
L:10 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:3242 M:254 E: No. of Bases conflict, this line has no nucleotides.